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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMES MacDOUGALL

Appeal 2014-007881
Application 10/794,471
Technology Center 3600

Before LINDA E. HORNER, JOHN C. KERINS, and
PHILLIP J. KAUFFMAN, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

James MacDougall (Appellant)¹ seeks our review under 35 U.S.C. § 134 of the Examiner's decision, as set forth in the Final Office Action, dated September 25, 2013 ("Final Act."), rejecting claims 1, 2, 21–29, 31, 32, and 34–40. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

¹ Appellant identifies the real party in interest as Honeywell International, Inc. Appeal Br. 1.

CLAIMED SUBJECT MATTER

Appellant's claimed subject matter relates to "aircraft engine controls that consider ground proximity." Spec., para. 1. Claims 1, 21, and 29 are independent. Claim 1 is reproduced below.

1. A system for controlling the power setting of an aircraft engine, comprising:

a ground proximity unit (GPU) for measuring current aircraft height-above-terrain (HAT) values H_c ;

one or more sensors coupled to the engine for detecting an out-of-range operating condition of the engine;

an engine control unit (ECU) coupled to the GPU, the one or more sensors and the engine for controlling operation of the engine in response to H_c and engine operating values determined by the one or more sensors; and

wherein, when the one or more sensors detects an out-of-range operating condition of the engine, which out-of-range operating condition of the engine is normally curable by reducing the engine power setting in order to prevent harm to the engine, the ECU, does not automatically reduce the power setting of the engine if $H_c < H(\min)$ wherein $H(\min)$ is a minimum cruising HAT value for the aircraft.

EVIDENCE

The Examiner relied upon the following evidence:

Zagranski	US 4,500,966	Feb. 19, 1985
Sherry	US 5,337,982	Aug. 16, 1994
Greene	US 6,450,456 B1	Sept. 17, 2002

REJECTIONS

The Final Action included the following grounds of rejection:

1. Claims 1, 2, 21–29, 31, 32, and 34–40 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.
2. Claims 1, 2, 21–29, 31, 32, and 34 under 35 U.S.C. § 103(a) as unpatentable over Greene and Zagranski.
3. Claims 1, 21, 29, and 35–40 under 35 U.S.C. § 103(a) as unpatentable over Sherry, Greene, and Zagranski.

PRIOR APPEAL

The present application was the subject of a prior appeal in which the Board affirmed a rejection of then-pending claims 1–7 and 21 under 35 U.S.C. § 103(a) as unpatentable over Greene and Zagranski. Appeal 2009-006088 (BPAI, May 13, 2010). The claims have been amended since the issuance of the decision in this prior appeal.

ANALYSIS

Written Description

Independent Claims 1 and 29

The Examiner rejected independent claims 1 and 29 for lack of adequate written description because the claim limitations that the system operate “wherein H(min) is a minimum cruising HAT value for the aircraft” and “wherein the predetermined threshold comprises a cruising altitude for the aircraft,” as recited in independent claims 1 and 29, respectively, are not supported adequately in the Specification. Final Act. 3. The Examiner

explained that the word “cruising” is not used in Appellant’s Specification and that:

[The] term “cruising” can deal with extremely high altitude such as long haul aircraft that can reach past 30,000 feet and cruise at that altitude. Furthermore, it is quite clear (especially with the disclosure and the drawings) that the current invention deals primarily with low altitude or landing (see paragraph 0023 of the specification) and not with ‘cruising’ such as those higher altitude. Therefore, the inclusion of the word “cruising” expands the scope of the invention and is thus new matter.

Id. (defining “cruising” according to its plain meaning as “travel at a moderate and efficient speed”).

We disagree with the Examiner that the addition of “cruising” to claims 1 and 29 expands the scope of the invention. Paragraph 23 of the Specification, on which the Examiner relies for this determination, describes that during flight, the invention prevents the ECU “from independently and without pilot input, reducing the engine thrust under conditions where the aircraft is below a predetermined HAT threshold.” This paragraph further describes that, for other or different scenarios such as landing, the ECU responds appropriately to power settings of the engines requested by the pilot or other flight crew. *Id.* In other words, the automated system is overridden when a pilot or other flight crew requests a power setting of the engines, such as might be requested during landing. *Id.* Thus, contrary to the Examiner’s position that the invention deals primarily with low altitude or landing; rather, the Specification describes that the automated operation of the ECU may not operate during landing if overridden by pilot inputs.

For these reasons, we do not sustain the Examiner's rejection of independent claims 1 and 29, and their dependent claims 2, 22–25, 31, 32, 34, 35, 37, 38, and 40, under 35 U.S.C. § 112, first paragraph for lack of adequate written description.

Independent claim 21

Independent claim 21 recites, in relevant part:

an engine control unit coupled to receive the proximity signal and the one or more engine parameter signals and operable, in response thereto, to reduce the power of the engine if (i) one or more of the engine parameter signals indicates an out-of-range operating condition of the engine, which out-of-range operating condition of the engine is normally curable by reducing the engine power setting in order to prevent harm to the engine in order to prevent harm to the engine, and (ii) the proximity of the aircraft to the ground surface is at or above a predetermined proximity value, reducing downward drift of the aircraft.

Appeal Br. 24 (Claims App.). With respect to independent claim 21, the Examiner explained that “applicant use of the terms ‘downward drift’ is also considered new matter since applicant has stated on the record that this can mean ‘cruising.’” Final Act. 3. The Examiner further stated “applicant has claimed that ECU reduces the power to the engine when ‘(ii) the proximity of the aircraft to the ground surface is at or above a predetermined proximity value, reducing downward drift.’ However, this seems to be a contradiction since a reduction in power does not appear to ‘reduce downward drift.’” *Id.* We agree with the Examiner that the written description fails to provide adequate support for a system in which reducing power to the engine causes a reduction in downward drift. To the contrary, the Specification describes

maintaining the thrust being provided by the engine to avoid having the aircraft drift lower. Spec., para. 23. For this reason, we sustain the rejection of independent claim 21, and its dependent claims 26–28, 36, and 39, under 35 U.S.C. § 112, first paragraph, for lack of adequate written description.

Obviousness

Claims 1 and 29

Both grounds of rejection based on obviousness of claims 1 and 29 are based on the Examiner’s interpretation of “cruising” as encompassing landing. In particular, the Examiner found that “Greene discloses an airborne power control system for automatically controlling power during the landing of an aircraft.” Final Act. 4 (citing Greene, col. 1, ll. 5–8). The Examiner explained that “[b]roadly interpreted, landing an aircraft is considered ‘cruising’ since it is done with a ‘moderate and efficient speed.’” *Id.* (quoting dictionary definition of “cruising” found in dictionary.com). Further, the Examiner determined it would have been obvious “to have made the ECU of Sherry not reduce power if the current altitude is below that of the minimum current altitude as taught by Greene so that the aircraft can still fly quickly.” *Id.* at 12 (finding that “Sherry’s aircraft is ‘cruising’ since it is flying at a moderate and efficient speed for landing”). For the reasons that follow, the Examiner’s definition of “cruising” is unreasonably broad in light of the understanding of one having ordinary skill in the avionics field.

The Examiner relies improperly on a general dictionary definition of “cruising” even though this term has a narrower meaning in the art, as

evidenced by the prior art of record. For example, Sherry distinguishes between different engagement scenarios including takeoff, climb, cruise, and descent. Sherry, Fig. 6. The Examiner's definition of "cruising" is also contradicted by evidence submitted by Appellant. For example, Exhibit B attached to the Declaration Under 37 C.F.R. § 1.132 of James MacDougall, dated July 19, 2013, provides that the cruise phase is understood to begin at the point where the aircraft reaches the top of climb. Ex. B, p. 2. This evidence supports Appellant's position that the Examiner's interpretation of "cruising" to encompass all phases of a flight is unreasonably broad. Reply Br. 2 (arguing that the Examiner is failing to use the well-known aviation definition of 'cruise'). For these reasons, both of the grounds of rejection of independent claims 1 and 29, and their dependent claims 2, 22–25, 31, 32, 34, 35, 37, 38, and 40, are based on an unreasonably broad interpretation of the claims. Accordingly, we do not sustain the rejections under 35 U.S.C. § 103(a) of these claims.

Claims 21, 26–28, 36, and 39

Having determined that claims 21, 26–28, 36, and 39 are unpatentable under 35 U.S.C. § 112, first paragraph, for lack of adequate written description, and because we agree with the Examiner that the claim language is inconsistent with the written description and requires clarification, we reverse the rejections of these claims under 35 U.S.C. § 103(a), because a determination of obviousness would require speculation as to the scope of the claims. *See In re Steele*, 305 F.2d 859, 862-63 (CCPA 1962) (holding that the Board erred in affirming a rejection of indefinite claims under

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35 U.S.C. § 103(a), because the rejection was based on speculative assumptions as to the meaning of the claims).

DECISION

We sustain the rejection of claims 21, 26–28, 36, and 39 under 35 U.S.C. § 112, first paragraph.

We do not sustain the rejection of claims 1, 2, 22–25, 29, 31, 32, 34, 35, 37, 38, and 40 under 35 U.S.C. § 112, first paragraph

We also do not sustain the rejections under 35 U.S.C. § 103(a) of claims 1, 2, 21–29, 31, 32, and 34 as unpatentable over Greene and Zagranski and of claims 1, 21, 29, and 35–40 as unpatentable over Sherry, Greene, and Zagranski.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED–IN–PART